What is claimed is:

1. A diagnostic device comprising a porous material, wherein the porous material comprises alumina, silica, or alumina and silica.
2. The diagnostic device of claim 1, further defined as a microtiter plate.
3. The diagnostic device of claim 1, further defined as a bead.
4. The diagnostic device of claim 1, wherein the porous material comprises alumina and silica.
5. The diagnostic device of claim 1, wherein the porous material is made from a composition comprising alumina, silica, and boron.
6. The diagnostic device of claim 1, wherein the porous material comprises about 1% to about 50% by weight alumina, and about 50% to about 98% by weight silica.
7. The diagnostic device of claim 1, wherein the porous material is made from a composition comprising about 1% to about 50% by weight alumina, about 50% to about 98% by weight silica, and about 1% to about 5% by weight boron.
8. The diagnostic device of claim 1, wherein the mean pore diameter of the porous material is greater than about 10 microns.
9. The diagnostic device of claim 1, wherein the density is at least about 6 pounds per cubic foot (96.1 kg/m^3).
10. The diagnostic device of claim 1, wherein the exposed surface of the porous material is at least about 50% silicon dioxide.
11. The diagnostic device of claim 1, wherein the porous material has been reacted to modify its surface chemistry properties.
12. The diagnostic device of claim 1, wherein an oligonucleotide is bound to the porous material.
13. The diagnostic device of claim 1, wherein DNA is bound to the porous material.
14. The diagnostic device of claim 1, wherein RNA is bound to the porous material.
15. The diagnostic device of claim 1, wherein a peptide is bound to the porous material.

16. The diagnostic device of claim 1, wherein an oligosaccharide is bound to the porous material.

17. The diagnostic device of claim 1, wherein a protein is bound to the porous material.

18. The diagnostic device of claim 1, wherein an antibody is bound to the porous material.

19. A method for the detection of a target molecule in a sample, the method comprising:

obtaining a diagnostic device, wherein the diagnostic device comprises a porous material comprising alumina, silica, or alumina and silica;

binding a partner molecule to the porous material, wherein the partner molecule binds to a target molecule;

obtaining a sample suspected of containing the target molecule;

contacting the diagnostic device and the sample to produce a partner molecule - target molecule complex; and

detecting the partner molecule - target molecule complex.

20. The method of claim 19, wherein the partner molecule is covalently bound to the porous material.

21. The method of claim 19, further defined as a microtiter plate.

22. The method of claim 19, further defined as a bead.

23. The method of claim 19, wherein the porous material comprises alumina and silica.

24. The method of claim 19, wherein the porous material is made from a composition comprising alumina, silica, and boron.

25. The method of claim 19, wherein the porous material comprises about 1% to about 50% by weight alumina and about 50% to about 98% by weight silica.

26. The method of claim 19, wherein the porous material is made from a composition comprising about 1% to about 50% by weight alumina, about 50% to about 98% by weight silica, and about 1% to about 5% by weight boron.

27. The method of claim 19, wherein the mean pore diameter of the porous material is greater than about 10 microns.

28. The method of claim 19, wherein the density of the porous material is at least about 6 pounds per cubic foot (96.1 kg/m^3).

29. The method of claim 19, wherein the exposed surface of the porous material is at least about 50% silicon dioxide.

30. The method of claim 19, wherein the partner molecule is a peptide.

31. The method of claim 19, wherein the partner molecule is an oligosaccharide.

32. The method of claim 19, wherein the partner molecule is a protein.

33. The method of claim 19, wherein the partner molecule is an antibody.

34. The method of claim 19, wherein the partner molecule is an oligonucleotide.

35. The method of claim 19, wherein the partner molecule is DNA.

36. The method of claim 19, wherein the partner molecule is RNA.

37. The method of claim 19, wherein the partner molecule - target molecule complex is detected by fluorescence.

38. The method of claim 19, wherein the partner molecule - target molecule complex is detected by radioactivity.

39. The method of claim 19, wherein the partner molecule - target molecule complex is detected by visible spectroscopy.

40. The method of claim 19, wherein the partner molecule - target molecule complex is detected by ultraviolet spectroscopy.

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